

## § 173.335

### § 173.335 Gas generator assemblies.

Gas generator assemblies (aircraft) containing liquefied non-flammable, non-toxic gas and a solid propellant cartridge must be packaged as follows:

(a) The gas must be packaged in specification steel cylinders authorized for any compressed gas except acetylene not exceeding 10.5 L (2.8 gallons) internal volume and having a minimum design burst pressure of 19,700 kPa (2,857 psig);

(b) Fittings must be protected against damage under conditions normal incident to transport, any trigger must be fitted with a safety locking pin, and a non-propulsive plug must be installed on the discharge tube; and

(c) Each complete unit must be individually and tightly packed to prevent movement in wooden boxes (4C1 or 4C2), plywood boxes (4D), reconstituted wood boxes (4F), fiberboard boxes (4G), or plastic boxes, (4H1 and 4H2) of Packing Group II performance level, or in the original manufacturer's transit box.

[Amdt. 173-224, 55 FR 52669, Dec. 21, 1990, as amended at 66 FR 45380, Aug. 28, 2001]

### § 173.336 Nitrogen dioxide, liquefied, or dinitrogen tetroxide, liquefied.

Nitrogen dioxide, liquefied, or dinitrogen tetroxide, liquefied, must be packaged in specification cylinders as follows:

(a) As prescribed in § 173.192, or

(b) Specification 3A480, 3AA480, 3AL1800, or 3E1800 metal cylinders, with valves removed, are authorized. Each valve opening must be closed by means of a solid metal plug with tapered thread properly luted to prevent leakages; valve protection cap must be used and be at least 4.76 mm (0.187 inches) thick gas-tight, with 4.76 mm (0.187 inches) faced seat for gasket and with United States standard form thread. Transportation in 3AL cylinders is authorized only by highway or rail. Each cylinder must be cleaned in compliance with the requirements of Federal Specification RR-C-901c, paragraphs 3.7.2 and 3.8.2. Cleaning agents equivalent to those specified in RR-C-901b may be used; however, any cleaning agent must not be capable of reacting with oxygen. One cylinder selected

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at random from a group of 200 or less cleaned at the same time must be tested for oil contamination in accordance with Specification RR-C-901b paragraph 4.4.2.3 and meet the standard of cleanliness specified therein.

[Amdt. 173-224, 55 FR 52669, Dec. 21, 1990, as amended at 57 FR 45464, Oct. 1, 1992; 66 FR 45379, Aug. 28, 2001]

### § 173.337 Nitric oxide.

Nitric oxide must be packed in Specification 3A1800, 3AA1800, 3E1800, or 3AL1800 cylinders charged to a pressure of not more than 5,170 kPa (750 psig) at 21 °C (70 °F). Cylinders must be equipped with a valve of stainless steel and valve seat of material which will not be deteriorated by contact with nitric oxide or nitrogen dioxide. Cylinders or valves may not be equipped with pressure relief devices of any type. Valve outlets must be sealed by a solid threaded cap or plug and an inert gasketing material. In addition—

(a) Specification 3E1800 cylinders must be overpacked in strong wooden boxes of such design as to protect valves from injury or accidental functioning under conditions incident to transportation. Each overpack must conform to § 173.25.

(b) Specification 3A, 3AA, and 3AL cylinders must have their valves protected by metal caps or other equally protective guards securely attached to the cylinders and be of sufficient strength to protect the valves from injury during transit, or by overpacking in strong wooden boxes of such design as to protect valves from injury or accidental functioning under conditions incident to transportation. Each overpack must conform to § 173.25. Transportation in 3AL cylinders is authorized only by highway or rail.

(c) Each cylinder must be cleaned in compliance with the requirements of Federal Specification RR-C-901C, paragraphs 3.7.2 and 3.8.2. Cleaning agents equivalent to those specified in RR-C-901C may be used; however, any cleaning agent must not be capable of reacting with oxygen. One cylinder selected at random from a group of 200 or less cleaned at the same time must be tested for oil contamination in accordance

with Specification RR-C-901C paragraph 4.4.2.3 and meet the standard of cleanliness specified therein.

[Amdt. 173-224, 55 FR 52669, Dec. 21, 1990, as amended at 66 FR 45380, Aug. 28, 2001]

#### § 173.338 Tungsten hexafluoride.

Tungsten hexafluoride must be packed in specification 3A, 3AA, 3BN, or 3E (§§ 173.36, 173.37, 173.39, 173.42 of this subchapter) cylinders. Cylinders must be equipped with a valve protection cap or be packed in a strong outside container complying with the provisions of § 173.40. Outlets of any valves must be capped or plugged. As an alternative, the cylinder opening may be closed by the use of a metal plug. Specification 3E cylinders must be shipped in an overpack that complies with the provisions of § 173.40.

[Amdt. 173-224, 55 FR 52669, Dec. 21, 1990]

#### § 173.340 Tear gas devices.

(a) Packagings for tear gas devices must be approved prior to initial transportation by the Associate Administrator.

(b) Tear gas devices may not be assembled with, or packed in the same packaging with, mechanically- or manually-operated firing, igniting, bursting, or other functioning elements unless of a type and design which has been approved by the Associate Administrator.

(c) Tear gas grenades, tear gas candles, and similar devices must be packaged in one of the following packagings conforming to the requirements of part 178 of this subchapter at the Packing Group II performance level:

(1) In UN 4C1, 4C2, 4D, or 4F metal-strapped wooden boxes. Functioning elements not assembled in grenades or devices must be in a separate compartment of these boxes, or in inner or separate outer boxes, UN 4C1, 4C2, 4D, or 4F, and must be so packed and cushioned that they may not come in contact with each other or with the walls of the box during transportation. Not more than 50 tear gas devices and 50 functioning elements must be packed in one box, and the gross weight of the outer box may not exceed 35 kg (77 pounds).

(2) In a UN 1A2 metal drum. Functioning elements must be packed in a separate inner packaging or compartment. Not more than 24 tear gas devices and 24 functioning elements must be packed in one outer drum, and the gross weight of the drum may not exceed 35 kg (77 pounds).

(3) In a UN 4G fiberboard box with inside tear gas devices meeting Specifications 2P or 2Q. Each inside packaging must be placed in fiberboard tubes fitted with metal ends or a fiber box with suitable padding. Not more than 30 inner packagings must be packed in one outer box, and the gross weight of the outer box may not exceed 16 kg (35 pounds).

(4) In other packagings of a type or design which has been approved by the Associate Administrator.

(d) Tear gas devices may be shipped completely assembled when offered by or consigned to the U.S. Department of Defense, provided the functioning elements are so packed that they cannot accidentally function. Outer packagings must be UN 4C1, 4C2, 4D, or 4F metal-strapped wooden boxes.

[Amdt. 173-224, 55 FR 52669, Dec. 21, 1990, as amended 66 FR 45379, Aug. 28, 2001]

### Subpart H [Reserved]

### Subpart I—Class 7 (Radioactive) Materials

SOURCE: Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, unless otherwise noted.

#### § 173.401 Scope.

(a) This subpart sets forth requirements for the packaging and transportation of Class 7 (radioactive) materials by offerors and carriers subject to this subchapter. The requirements prescribed in this subpart are in addition to, not in place of, other requirements set forth in this subchapter for Class 7 (radioactive) materials and those of the Nuclear Regulatory Commission in 10 CFR part 71.

(b) This subpart does not apply to:

(1) Class 7 (radioactive) materials produced, used, transported, or stored within an establishment other than during the course of transportation, including storage in transportation.